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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,240	08/05/2003	Yet-Ming Chiang	M0925.70138US00	9369
23628	7590	07/15/2004	EXAMINER	
WOLF GREENFIELD & SACKS, PC FEDERAL RESERVE PLAZA 600 ATLANTIC AVENUE BOSTON, MA 02210-2211			KOSLOW, CAROL M	
			ART UNIT	PAPER NUMBER
			1755	

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/635,240	Applicant(s) CHIANG ET AL.	
	Examiner C. Melissa Koslow	Art Unit 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004 and 18 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 32-42 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 and 3 is/are allowed.
- 6) ☒ Claim(s) 1, 4-31, 43 and 44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1. ☐ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant has complied with the conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120.

Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. However, the provisional application upon which priority is claimed fails to provide adequate support under 35 U.S.C. 112 for claims 1-12 of this application. There is no teaching in any of the provisional applications or in application 09/174,981 of materials having the formulas of claims 1-3. Accordingly, claims 1-12 have an effective filing date of 6 April 2001.

Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged to provisional applications 60/085,109 and 60/062,531. However, the provisional application upon which priority is claimed fails to provide adequate support under 35 U.S.C. 112 for claims 13-31, 43 and 44 of this application. The claimed materials are not found in these provisional applications. Accordingly, claims 13-31, 43 and 44 have an effective filing date of 19 October 1998.

The information disclosure statement of 28 June 2004 has been received by the office, but it has not been scanned in as to the time of this action.

Applicant's election with traverse of Group I in the reply filed on 7 June 2004 is acknowledged. The traversal is on the ground(s) that it would not be an undue burden to search all the claims. This is not found persuasive because the separate classifications of each group is *prima facie* evidence that the search of all the claims would be a serious burden.

The requirement is still deemed proper and is therefore made FINAL.

Claims 32-42 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

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The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

The disclosure is objected to because of the following informalities: The status of application 09/827,806 needs to be updated in the specification. Appropriate correction is required.

The drawings are objected to because in figures 31 and 33C, there are copy marks of punched holes and in figures 35, 36A, 40A and 40B, it cannot be determined which line corresponds to which value being measured. All the lines in figures 35, 36A, 40A and 40B look identical. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the

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changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 5, 17, 18, 30 and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support in the specification that the materials of claims 1-3, 15 and 16 are in the form of a rod, ribbon, sheet or polycrystalline fiber. The specification only teaches the materials in the form of single crystal fibers. The specification only teaches the material of claim 16 in the form of a single crystalline or textures crystalline material. Thus claim 17 is not supported since it includes randomly oriented polycrystalline materials. Finally, definitions of the variables in claims 30 and 31 does not appear to be present in the specification. Applicant should clearly give these definitions in the specification.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 13-31, 43 and 44 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4, 9-17, 22, 23, 35, 36, 40 and 41 of U.S. Patent No. 6,231,779. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed fibers and material in the patent suggest those claimed in this application.

Claims 1-4, 9-13 and 15-17 of the patent suggest the material of claims 15-17 and 20-29 of this application since the wording of claims 1-4, 9-13 and 15-17 in the patent are nearly identical to claims 15, 16 and 20-21 in this application except the M' group in claims 15 and 16 includes metals not in the M' of the patent. Claims 9 and 35 teach the materials in the form of single crystalline fibers, which suggests the materials of claims 17 and 18. Claims 22 and 23 suggest the composition of claims 19, 30 and 31 since the wording of claim 22 in the patent is nearly identical to claim 30 in this application except the M' group in claim 30 includes metals not in the M' of the patent. Claims 1, 11, 12, 40 and 41 suggest the material of claims 13, 14, 43 and 44 because the variables in the material of claim 1 of the patent overlap those of claim 30. The first occurrence of γ in claim 1 should be δ as taught in column 4, line 5.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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Claims 1 and 4-12 are rejected under 35 U.S.C. 102(a) as being anticipated by JP 2001-48641.

The translation for this reference teaches a piezoelectric ceramic having the formula $(1-x)(\text{Na}_{1/2}\text{Bi}_{1/2})\text{TiO}_3-x\text{LaFeO}_3$, where $0 < x \leq 0.3$. This formula can be rewritten as $(\text{Na}_{1/2}\text{Bi}_{1/2})_{1-x}\text{La}_x\text{Ti}_{1-x}\text{Fe}_x\text{O}_3$, where $0 < x \leq 0.3$. This formula falls within that of claim 1. The taught ceramic is polycrystalline and can be in the shape of a disk, which is a type of sheet. While the reference is silent as to the properties of claims 8-12, one of ordinary skill in the art would expect the taught material to inherently have values that fall within the claimed ranges or to have the claimed field-forced transition, absent any showing to the contrary, since the composition falls within that of claim. The reference teaches the claimed material.

Claims 2 and 3 are allowable over the cited art of record since none of the references teach the materials having the claimed formulas.

U.S. patent 6,426,018 is cited as of interest since it teaches a material whose formula overlaps that of claim 1, but it has an effective filing date is after applicant's effective filing date for these claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached at (571) 272-1362.


The fax number for all official communications is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk
July 13, 2004



C. Melissa Koslow
Primary Examiner
Tech. Center 1700